



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/534,412

05/11/2005

Shigeo Yukawa

043167

7161

38834

7590

06/22/2009

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP

1250 CONNECTICUT AVENUE, NW

SUITE 700

WASHINGTON, DC 20036

EXAMINER

CHEVALIER, ALICIA ANN

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

06/22/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/534,412

Applicant(s)

YUKAWA ET AL.

Examiner

ALICIA CHEVALIER

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 1-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

RESPONSE TO AMENDMENT

Request for Continued Examination

1. The Request for Continued Examination (RCE) under 37 CFR 1.53 (d) filed on April 2, 2009 is acceptable and a RCE has been established. An action on the RCE follows.
2. Claims 1-15 are pending in the application, claims 11-15 are withdrawn from consideration.
3. Amendments to the claims, filed on April 2, 2009, have been entered in the above-identified application.
4. It is noted that the amendments to claims filed on April 2, 2009 is non-compliant because it has failed to meet the requirements of 37 CFR 1.121, as amended on June 30, 2003 (see *68 Fed. Reg. 38611*, June 30, 2003). The amendment document is non-compliant because claims 11-15 have the wrong status identifier. They all should have the status identifier (withdrawn).

WITHDRAWN REJECTIONS

5. The 35 U.S.C. §102 rejection of claims 1-4, 6 and 7 over Tolliver (US Patent No. 5,069,964), made of record in the office action mailed January 7, 2009, pages 2-3, paragraph #3 has been withdrawn due to Applicant's amendment in the response filed April 2, 2009.
6. The 35 U.S.C. §103 rejection of claim 5 as over Tolliver (US Patent No. 5,069,964), made of record in the office action mailed January 7, 2009, pages 3-4, paragraph #4 has been withdrawn due to Applicant's amendment in the response filed April 2, 2009.

7. The 35 U.S.C. §103 rejection of claims 8-10 as over Tolliver (US Patent No. 5,069,964) in view of Ojeda et al. (US Patent No. 6,326,072, made of record in the office action mailed January 7, 2009, page 4, paragraph #5 has been withdrawn due to Applicant's amendment in the response filed April 2, 2009.

REJECTIONS

8. **The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.**

Claim Rejections - 35 USC § 103

9. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tolliver et al. (U.S. Patent No. 5,069,964) in view of Buccellato et al. (U.S. Patent Application Publication No. 2002/004135).

Tolliver discloses a retroreflective sheet (*title*), comprising: plural retroreflective elements (*col. 4, lines 62*); a resin support sheet (*binder layer, col. 4, line 53*); a transparent cover film (*face member, col. 10, lines 12-14*) disposed on a surface side of the resin support sheet; and a pressure-sensitive adhesive layer (*intermediate adhesive, col. 8, lines 27-31*) formed on a rear face side of the resin support sheet, wherein the retroreflective elements are held in at least one of the resin support sheet and the cover film, the resin support sheet and the cover film are connected to each other by heat press emboss forming from the rear face side of the resin support sheet so as to form a connection part, a groove of the connection part is formed on the rear face

side of the resin support sheet, the groove is filled with a part of the pressure-sensitive adhesive layer (*figures 1 and 2*).

The retroreflective element is a transparent bead of which a hemisphere part is covered with a reflective mirror, and is supported so that the hemisphere part of the transparent bead covered with the reflective mirror may be embedded in the resin support sheet (*reflectors, col. 4, lines 65-66 and figures 1 and 2*).

Tolliver fails to disclose the pressure-sensitive adhesive is formed of a rubber-based or an acrylic resin containing a cross-linking copolymer having a functional group and a hardening agent.

Buccellato discloses a retroreflective sheet (*page 1, paragraph [0011]*) comprising a pressure-sensitive adhesive layer (*abstract*) formed of a rubber-based resin or an acrylic resin (*page 3, paragraph [0028] and page 8, paragraph [0086]*). The adhesive further comprising a cross-linking acrylic copolymer having a functional group (*page 4, paragraph [0035]*) and a hardening agent (*page 10, paragraph [0113]*). The thickness is about 127 micrometers (*page 4, paragraph [0043]*), which is deemed to be about 110 micrometers. The adhesive has a high loss shear modulus and high storage shear modulus under impact conditions and has better weatherability (*page 2, paragraphs [0024]-[0025]*).

Buccellato does not explicitly disclose the residual rate or the fall time of the pressure sensitive adhesive as claimed in claims 1-4. However, these properties would be inherent since Buccellato uses the same claimed pressure sensitive adhesive, e.g. cross-linking acrylic copolymer having a functional group (*page 4, paragraph [0035]*) and a hardening agent (*page 10, paragraph [0113]*).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use Buccellato's PSA as the PSA in Tolliver in order to have an adhesive with better weatherability and high shear modulus.

10. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tolliver in view of Buccellato as applied above, and further in view of Ojeda et al. (U.S. Patent No. 6,326,072).

Tolliver and Buccellato are relied upon as described above. Tolliver further discloses using a removable protective liner over the adhesive during handling (*col. 5, lines 9-10*) that is laminated on the pressure sensitive adhesive layer (*figure 2*).

Tolliver and Buccellato fail to disclose the protective liner is resin release film made of an unstretched polypropylene film or a low-density polyethylene film.

Ojeda teaches in the background information that various materials are known to be used to manufacture release liners such as unstretched polypropylene (*col. 1, lines 37-47*). Ojeda also discloses that release liners are used in transportation and storage of self-sticking products (*col. 1, lines 19-23*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a known material such as unstretched polypropylene film as taught by Ojeda as the release liner in the combination of Tolliver and Buccellato.

The combination of Tolliver, Buccellato and Ojeda do not explicitly disclose the young's modulus or the release film as claimed in claim 9. However, these properties would be inherent since the combination of Tolliver, Buccellato and Ojeda uses the same claimed release film, e.g. unstretched polypropylene film.

ANSWERS TO APPLICANT'S ARGUMENTS

11. Applicant's arguments in the response filed April 2, 2009 regarding the previous rejections of record have been considered but are moot due to the new grounds of rejection.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (571) 272-1490. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alicia Chevalier/
Primary Examiner, Art Unit 1794
6/22/2009